

Amendments to the Specification

On the first page of the specification which follows the title page and precedes page 2 of the specification, please amend the first paragraph as follows:

--This application is a continuation of U.S. Patent Application No. 09/549,642, filed April 14, 2000, now abandoned; which, in turn, is a divisional of U.S. Patent Application no. 09/303,375, filed on April 30, 1999, now abandoned; which, in turn, is a ~~continuation-in-part~~ divisional of U.S. Patent Application no. 08/600,273, filed on February 8, 1996, now U.S. Patent no. 5,958,406; which, in turn, is a continuation-in-part of U.S. Patent Application No. 08/486,820, filed June 7, 1995, now U.S. Patent no. 6,030,612; which, in turn, is a continuation-in-part of U.S. Patent Application no. 08/385,540, filed February 8, 1995, now U.S. Patent no. 5,945,102; which, in turn, is a continuation-in-part of U.S. Patent Application no. 08/338,501, filed on November 22, 1994, now abandoned which, in turn, claims the benefit of International Application no. PCT/SE93/00455, filed on May 21, 1993, designating the United States of America, under 35 U.S.C. §365(c).—

Please amend the paragraph at page 2, lines 3-28 of the specification as follows:

-- The present invention provides a multifunctional enzyme that has been found to be useful in numerous medical and cosmetic contexts. In particular, the invention relates to an enzyme having multifunctional activity comprising at least one of a chymotrypsin; trypsin, collagenase, elastase or exo peptidase activity, a molecular weight between about 20 kd and about 40 kd as determined by SDS PAGE, and substantial homology to krill-derived multifunctional hydrolase. Preferably, the enzyme has a molecular weight of from about 26 kd to about 32 kd as determined by SDS (sodium dodecyl sulfate) polyacrylamide gel electrophoresis ("PAGE"), more preferably about 29 kd. Preferably, the enzyme is selectively reactive with cell-surface receptors such as proteins or glycolipids. Preferably, the enzyme is substantially purified. Preferably the enzyme has a purity with respect to macromolecules of at least about 90%, more preferably least about 95%, more preferably about 97%, still more preferably about 99%, yet more preferably 99.7% with respect to macromolecules. Preferably, the enzyme has an N-terminal sequence comprising: I-V-G-G-X-E/D-B-X-X-X-X-Z/B'-P-Z/H-Q-B-X-B'/Z, wherein X is any amino acid, Z is an aromatic amino acid, B is an amino acid having a C2-C1 to C6 alkyl side chain, and B' is

leucine or isoleucine. More preferably, all amino acids represented by X, Z or B are natural amino acids. Preferably, the enzyme has an N-terminal sequence comprising: I-V-G-G-X-E/D-B wherein X is any amino acid, B is an amino acid having a ϵ -C₁ to C₆ alkyl side chain. Preferably, the enzyme is the krill-derived multifunctional hydrolase. Preferably, the enzyme has the N-terminal sequence: I-V-G-G-N/M-E-V-T-P-H-A-Y-P-W-Q-V-G-L-F-I-D-D-M-Y-F (SEQ ID NO. 1). For the purposes of this application, "substantially pure" shall mean about 60% purity.--

Please amend the paragraph on page 36, lines 2-39 (Table 2) as follows:

-- Table 2 - N-Terminal Sequences

<u>Species</u>	<u>SEQ ID NO</u>	<u>Sequence</u>
<i>Penaeus vanameii</i> 1 (shrimp)	3	I V G G V E A T P H S W P H Q A A L F I D D M Y F
<i>Penaeus vanameii</i> 2	4	I V G G V E A T P H S X P H Q A A L F I
<i>P. monodon</i> , trypt. (shrimp)	5	I V G G T A V T P G E F P Y Q L S F Q D S I E G V
<i>P. monodon</i> , chym. 1	6	I V G G V E A V P G V W P Y Q A A L F I I D M Y F
<i>P. monodon</i> , chym. 2	7	I V G G V E A V P H S W P Y Q A A L F I I D M Y F
<i>Uca pugilator</i> I (crab)	8	I V G G V E A V P N S W P H Q A A L F I D D M Y F
<i>Uca pugilator</i> II	9	I V G G Q D A T P G Q F P Y Q L S F Q D
King crab	10	I V G G Q E A S P G S W P ? Q V G L F
Kamchatka crab	11	I V G G Q E A S P G S W P X Q V G L F F
	12	I V G G T E V T P G E I P Y Q L S L Q D
	13	I V G G T E V T P G E I P Y Q L S F Q D
	14	I V G G S E A T S G Q F P Y Q X S F Q D
Crayfish	15	I V G G T D A T L G E F P Y Q L S F Q N
krill Enzyme	1	I V G G N E V T P H A Y P W Q V G L F I D D M Y F
	2	I V G G M E V T P H A Y P W Q V G L F I D D M Y F
Bovine chymotrypsn	16	I V N G E D A V P G S W P W Q V S L Q D
Salmon Atlant. Cod Atlantic Cod	18 17	I V G G Y E C K A Y S Q A Y Q V S L N S G Y H Y C
	19 18	I V G G Y E C T K H S Q A H Q V S L N S G Y H Y C
	20 19	I V G G Y E C T R H S Q A H Q V S L N S G Y H Y C

X = unknown or undefined.--

Please amend the paragraph bridging from line 27 of page 42 to line 11 of page 43 of the specification as follows:

--Samples of each preparation were analyzed by SDS-PAGE, and each preparation was found to contain a single protein that banded with apparent molecular weight of 29 kd. The SDS bands were electroblotted onto PVDF membranes and sequenced through 25 cycles of Edman degradation. See, Matsudaira, *J. Biol. Chem.*, 262: 10035-10038, 1987. Each preparation yielded the identical sequence: I V G G M/N E V T P H A-Y P W Q V G L F I D D M Y F (SEQ ID NO. 1). Accordingly, it is clear that all three preparations are homogenous, although each is micro-heterogeneous at position 5. The proteolytic activity of each of the three preparations was tested against substrate benzoyl-val-gly-arg-p-nitroaniline. Hydrolysis of this substrate can be monitored at 210 nm, reflecting the release of p-nitroaniline. The pH-dependence of the three preparations at an ionic strength of 0.1 M is shown in FIG. 9. The profile for Prep-3 (shown with filled squares), Prep-8 (shown with open diamonds) and Prep-11 (shown with filled diamonds) are identical. All three had a pH optimum for this substrate of 9.5.--

After page 101 of the claims of the specification, please amend the specification to enter the enclosed pages 1-6 of the paper copy of the sequence listing for the above-identified application.